WHAT IS CLAIMED IS:

1. A method for dynamic contrast enhancement by area gray-level detection with an image comprising steps of:

transferring color space of said image from color space of RGB to that with brightness Y;

making a brightness distribution histogram based on brightness of said image to get a corresponding relation between a gray level value and a count;

dividing the whole brightness distribution into even brightness distribution areas by gray level value, and calculating each amount of counts of each brightness distribution area;

according to said amount of counts, deciding a transfer curve to do brightness histogram equalization to the image for forming a new image with enhanced contrast.

2. The method according to Claim 1 wherein said color space with brightness Y is YCrCb.

3. The method according to Claim 1 wherein said color space with brightness Y is YPbPr.

4. The method according to Claim 1 wherein In accordance with one aspect of the present invention, the color space with brightness Y is YUV.

5. The method according to Claim 1 wherein said counts here mean the quantity of pixels of a gray level value in said image.

6. The method according to Claim 1 wherein the range of said gray level value is from 0 to 255.

7. The method according to Claim 1 wherein the steps of deciding said transfer curve based on the amounts of counts are :

making that each brightness distribution area is respectively named $A1,A2,\ldots,A_{n-1},A_n$, and each amount of counts of $A1,A2,\ldots,A_{n-1},A_n$, is respectively named $Q1,Q2,\ldots,Q_{n-1},Q_n$, where n means the number of each brightness distribution area;

making $H1 = Q1 + Q2$, $H2 = Q3 + Q4$, ... , $H_{n/2} = Q_{n-1} + Q_n$;

making $Yout(1) = Yin(1) * Q1 / H1$, $Yout(2) = Yin(2) * Q3 / H2$,..., $Yout(n/2) = Yin(n/2) * Q_{n-1} / H_{n/2}$, where Yin(1) is said gray level value of the boundary points of A1 and A2; Yin(2) is said gray level value of the boundary points of A3 and A4; ...; Yin(n/2) is said gray level value of the boundary point of A_{n-1} and A_n. And, Yout (1), Yout(2), ...,Yout(n/2) are gray level values of the image with enhanced contrast;

getting said transfer curve by the corresponding relation between Yin(1) and Yout(1), Yin(2) and Yout(2), ..., Yin(n/2) and Yout(n/2).

8. The method according to Claim 1 wherein a move average is calculated by Yout(1), Yout(2), ..., Yout(n/2) of multiple images.

9. The method according to Claim 1 wherein said images include four successive images.